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भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION

PREFACE

For generations, mountain communities have relied on springs as their primary water source, evident from the clustering of villages around these natural fountains. These springs have not only sustained life but also held profound cultural and social significance, embodying traditional methods of resource conservation. These springs have remained steadfast in ensuring water security for the inhabitants of India's mountainous regions. Yet, despite their indispensable role, they've been largely overlooked. The burgeoning population coupled with climate change has accelerated the depletion of these vital water reservoirs, posing a grave threat to the communities dependent on them. The urgency to rejuvenate these springs cannot be overstated. It demands a strategic approach that integrates scientific insights with indigenous knowledge, acknowledging the intricate dynamics of these fragile ecosystems.

Over the past decade, several initiatives have been undertaken by both governmental and non-governmental organizations to address spring-shed development and management.

However, a lack of standardisation in data collection and management methodologies persists among these diverse entities. This inconsistency poses a significant obstacle to scaling up spring-shed management efforts nationwide. It is imperative to establish a standardized framework for spring-shed management, synthesising the wealth of local wisdom with modern scientific practices. Only through cohesive collaboration and unified action can we effectively safeguard these invaluable water sources for generations to come.

To accelerate spring-shed management efforts nationwide, the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti, Government of India, established a Steering Committee focused on Spring-shed Mapping of IHR Including Mountainous Regions of the Country and Spring-shed Based Watershed Management Plan.' This committee, comprising officials from state and central agencies, NGOs, and domain experts, aims to standardise methodologies, initiate mapping, and enhance capacity for spring-shed management. Additionally, it seeks to address challenges faced by implementing agencies by developing a comprehensive "resource book" on the subject.



The resource book is the positive outcome of brainstorming and workshops spearheaded by the steering committee. The book contains 11 chapters covering various essential aspects of spring-shed management like database assessment, standard definitions and classifications, mapping methodologies, discharge measurement techniques, holistic management strategies, water quality protocols, environmental isotopes' use, tailored guidelines, discharge indexes, project impacts, and capacity building, addressing challenges, skills gaps, and effective mechanisms through dedicated chapters.

This Resource Book has led to the SoP formulation for spring-shed management. Both of these documents are expected to enhance ongoing efforts and motivate stakeholders to promote the sustainable development of these vital resources. It will also serve as a valuable resource for incorporating future contributions from implementing agencies. I believe it will usher in a new era of holistic spring-shed management, ensuring the preservation and optimal utilisation of this precious resource.

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Joint Secretary

**Chairman, Steering Committee for Spring-shed Mapping of
IHR including Mountainous Regions of the Country**

